

OPINIONS RENDERED BY THE INTERNATIONAL  
COMMISSION ON ZOOLOGICAL  
NOMENCLATURE

OPINIONS 82 TO 90

OPINION 82

SUSPENSION OF RULES FOR *MUSCA* LINNAEUS, 1758A,  
TYPE *M. DOMESTICA*

SUMMARY.—By authority of the power conferred on the Commission by the 9th International Congress of Zoology to suspend the Règles as applied to any given case where in its judgment the strict application of the Règles will clearly result in greater confusion than uniformity, Article 30 is hereby suspended in the case of *Musca* Linnaeus, 1758, and *Musca domestica* Linnaeus, 1758, is hereby designated as type of *Musca* without prejudice to other cases.

STATEMENT OF CASE.—The Commission has received two separate requests bearing upon the genus *Musca* Linn., 1758, and one of these considers also the genus *Calliphora* Desvoidy, 1830. The more complete statement of the case is that submitted by W. Dwight Pierce and reads as follows (Additions by the Secretary are marked \*):

THE CASES OF *MUSCA DOMESTICA* LINNAEUS, AND *CALLIPHORA*  
*VOMITORIA* LINNAEUS

ORIGINAL DESCRIPTION OF *Musca*

1. Linnaeus, Carolus, 1758, *Systema Naturae*, 10th edit.  
Genus No. 222 *Musca*, pp. 580-601, 100 species. Includes No. 52, *vomitorea*, p. 595; No. 54, *domestica*, p. 596.

SUBSEQUENT REFERENCES TO *Musca*

2. Geoffroy, Et. L., 1762, *Histoire abrégée des Insectes*. Vol. 2.  
Genus *Musca*, pp. 483-538. Includes No. 50 (*vomitorea*), No. 66 (*domestica*).

3. Fabricius, Johann Christian, 1775, *Systema Entomologiae*.  
Genus No. 173, *Musca*, pp. 773-787. Includes No. 5, *domestica* (p. 774),  
No. 13, *vomitória* (p. 776).
4. DeGeer, Charles, 1776, *Mémoires pour servir à l'Histoire des Insectes*.  
Genus No. 69, *La Mouche, Musca*. The genus contains in Famille 2, No. 4,  
*vomitória* (pp. 57-60), and No. 10, *domestica* (pp. 71-78).
5. Fabricius, J. C., 1781, *Species Insectorum*, vol. 2.  
Genus 176, *Musca* (pp. 435-455). No. 7, *domestica*; No. 17, *vomitória*.
6. Fabricius, J. C., 1787, *Mantissa Insectorum*, vol. 2.  
Genus 182, *Musca* (pp. 342-353). No. 9, *domestica*; No. 19, *vomitória*.
7. Fabricius, J. C., 1794, *Entomologiae Systematica*.  
Genus 233, *Musca* (pp. 312-361). No. 11, *domestica*; No. 25, *vomitória*.
- 7a. Lamarck, 1801a, 310-311 gives 2 species (1) Antennes à soie plumeuse,  
\**Musca domestica* L. (2) Antennes à soie nue, p. 311 \**Musca grossa*  
Linn. Fab.
8. Latreille, P. A., 1805 (An. xiii), *Histoire Naturelle, Générale et Particulière des Crustacés et des Insectes*, vol. 14.  
Genus DXXXII\*, *Mouche. Musca* (pp. 380-381). No. 1, *vomitória*;  
No. 3, *domestica*.
9. Fabricius, J. C., 1805, *Systema Antiliatorum*.  
Genus 65, *Musca* (pp. 283-308). No. 18, *domestica*; No. 34, *vomitória*.
- \*9a. Dumeril, 1806, 282.  
Genus *Musca*. "10. Les mouches (*musca*, Linn.) sont les seules espèces qui aient le poil latéral des antennes plumeux comme la mouche domestique, et qui s'éloignent d'ailleurs de tous les genres précédens."

PERIOD IN WHICH TYPE DESIGNATIONS APPEAR

10. Latreille, Pierre André, 1810, *Considérations Générales sur l'Ordre Naturel des Animaux*.  
Genus 694, *Mouche. Musca* (p. 400). In "Table des Genres avec l'indication de l'espèce qui leur sert de type," p. 444 appears, *Mouche, Musca vomitória*, F. This in accordance with Opinion No. 11 of the International Commission is type. [\* On the assumption that *Musca vomitória* F. includes *M. vomitória* L.—C. W. S.]
11. Fallen, Carolus, Jr., 1820, 1823, *Monographia Muscidum Sveciac*.  
Genus *Musca* begins on p. 36 (1820). No. 22, *vomitória* (p. 47, 1821);  
No. 26, *domestica* (p. 49, 1823).
12. Meigen, Johann Wilhelm, 1826, *Systematische Beschreibung der bekannte europäischen zweiflügeligen Insekten*. Theil 5.  
Genus CLVI. *Musca* (pp. 49-80). No. 21, *vomitória* (p. 60); No. 31, *domestica* (pp. 67-69).
13. Robineau-Desvoidy, J. B., 1830, *Essai sur les Myodaires*. On p. 373, "Les Muscides, qui ont le *Musca domestica* et le *M. vomitória* (Linn.) pour types," etc.  
Genus XII, *Musca*, with 13 species (pp. 394-399). No. 10, *domestica* (p. 398). On p. 433, *Calliphora*, n. g. including 17 species. "Ce genre a pour type le *Musca vomitória* (Linn.)."

14. Macquart, J., 1834. Insectes Diptères du Nord de la France, Athéricères. Genus *Mouche*, *Musca* (p. 19). On pp. 19, 20. "Ce genre dans lequel Linnée comprenait non seulement l'immense famille des Muscides, mais encore les Syrphides, etc. . . . , est arrivé, par l'effet des divisions . . . , à ne contenir que la *Mouche domestique* et quelques espèces voisines. Cet insecte, a été considéré comme le type de tant d'autres, et dont le nom si vulgaire, depuis la plus haute antiquité, a reçu des acceptions si variées, paraît maintenant dégagé de tout ce qui lui est étranger."  
Genus *Calliphora* (pp. 23-26) includes as first species, *vomitória*.
15. Westwood, John O., 1840, an introduction to the Modern Classification of Insects. *Calliphora*. Type designated as *vomitória* (p. 141, see also 569). *Musca*. Type designated as *domestica* (p. 141, see also 570).
16. Coquillett, D. W., 1910. The type species of North American genera of Diptera. Proc. U. S. Nat. Mus., vol. 37, No. 1719. On page 517, "*Calliphora* Desvoidy, Essai Myod., p. 433, 1830, 17 species. Type, *Musca erythrocephala* Meigen, by original designation (as *vomitória* Linnaeus)."  
On p. 571, "*Musca* Linnaeus, Syst. Nat., 19th ed., p. 589, 1758, 100 species. Type, *Musca domestica* Linnaeus, the fifty-fourth species, by designation of Macquart, Ins. Dipt. Nord. France, Athér., 1834, p. 20."
17. Townsend, C. H. T., 1915. Correction of the misuse of the generic name *Musca*, with description of two new genera. Journ. Wash. Acad. Sci., vol. 5, No. 12, pp. 433-436.  
*Musca* Linnaeus, type *vomitória* F. = L. (designated by Latreille 1810, p. 444).  
*Calliphora* R.-D., 1830, type *vomitória* R.-D. nec L. = *M. erythrocephala* Meigen, which is congeneric with *vomitória* L.  
*Promusca* Townsend, n. gen., type by original designation, *domestica* L.

DISCUSSION BY DR. PIERCE.—There is no question from above data, if they present the entire case, that *Musca* has for its type *vomitória* L., and that Townsend was completely in accord with the International Rules and Opinions in erecting a new genus for *domestica*.

From the standpoint purely of cold-blooded legal procedure there is no other way to look at the question.

On the other hand the Congress of Zoology has left open a method of procedure whereby common usage can be made to supersede the strict application of the Law of Priority.

There can be no question, after looking over the above references and the thousands of publications on both of these extremely important medicinal species, that it would be a great misfortune to the public at large, the entomological and the medical professions, to adopt the legally correct combinations proposed by Dr. Townsend. *Musca domestica* has been known from time of antiquity, and has never been known otherwise since the establishment of the binomial nomenclature in 1758. Very few insects or even animals have such a reputation. Only one man (Townsend), whose departure from custom has not been accepted, has ventured to upset the stability of this name, for we can hardly assume that Latreille expected *domestica* to be separated from *Musca* when he made his designation of *vomitória*, if indeed he intended it as a designation in our present sense of the word. Many believe he meant only example.

Furthermore the genus *Calliphora* has found a place in medical and entomological literature with *vomitória* as its type, and has remained stable for almost a century.

*Musca domestica* is one of the few insect species known the world around to scientists and general public alike. The public at least will never know it otherwise. The scientific fraternity will accept with the greatest reluctance the chaos-making change. It is therefore that the following request is made of the International Commission on Zoological Nomenclature.

ACTION REQUESTED.—The signers hereby formally make application of the International Commission on Zoological Nomenclature to place the combinations *Musca domestica* Linnaeus and *Calliphora vomitória* Linnaeus in the list of Nomina Conservanda, thus definitely establishing *domestica* L. as type of *Musca*, and *vomitória* L. as the type of *Calliphora*. Robineau-Desvoidy definitely studied that *vomitória* Linnaeus was type of *Calliphora*, although he personally studied a closely related species, possibly identical, which he mistook for Linnaeus' species.

This request is made on the ground of practical utility, universal usage, and an unbroken history of consistent usage (with only two exceptions as above noted), in the face of a perfectly legal procedure which causes confusion and innumerable difficulties.

Doctor Pierce's request for suspension of the rules is signed also by 22 additional entomologists as follows: L. O. Howard, W. D. Hunter, W. Dwight Pierce, F. C. Bishopp, R. H. Hutchison, U. C. Loftin, W. E. Dove, Henry Fox, W. J. Phillips, B. R. Leach, F. L. Simanton, A. J. Ackerman, J. B. Gill, Dwight Isely, Thomas E. Snyder, F. R. Cole, Jacob Kotinsky, C. H. Popenoe, F. H. Chittenden, W. B. Wood, A. C. Baker, W. R. Walton, A. L. Quaintance.

DISCUSSION BY SECRETARY.—In accordance with the provisions governing the use of the Plenary Power by the Commission, the Secretary gave formal notice to the Zoological Profession that these cases would come before the Commission for consideration. See (1) *Monitore Zoologico Italiano* 1917, v. 28, 183; (2) *Ann. Mag. Hist. No.* 114, 1917, v. 19, 484; (3) *Zool. Anz.*, Feb. 13, 1923, p. 46. These notices have resulted in communications reaching the Secretary as follows:

*Favorable to suspension:* E. E. Austen, British Museum; A. Brooker Klugh, Ontario; Chr. Aurivillius, Stockholm; E. P. Felt, State Entomologist, N. Y.; Sociedad Entomológica de España; Sociedad (Society of Minerva) Zaragonezade Ciencias Naturales; Academia de Ciencias de Zaragoza; Professors Andres (Paroma), Corti (Pavia), Berlese (Firenze), Giglio-Tos (Torino), Griffini (Bologna); Commissione de Nomenclatura Zoologica (Unione Zoologica Italiana) composed of Professors Monticelli, Ficalbi, Rosa, Ghiga; Will Lundbeck (Copenhagen); Mortensen (Copenhagen, who states

that all of his colleagues, including Lundbeck, agree), Aldrich (West Lafayette), Cockerell (Boulder).

*Opposed to suspension:* Professors Bezzi (Torino); W. L. McAtee, J. R. Mallock, Remington Kellogg (U. S. Biological Survey); and Silvestri (Portici).

Letters from England indicate that English entomologists consider that Lamarck in 1801 determined *Musca domestica* as type of *Musca*. This view however is not in accordance with Opinion 79 (C. L. 50).

A very extensive correspondence on the foregoing proposition has reached the Secretary. From a strict standpoint of classification the evidence available in respect to the possible identity of *Promusca* 1915, type *M. domestica*, *Conostoma* 1801, type *Ascaris conostoma* = larva of ?*M. domestica* and *Conosoma* 1802, type *Ascaris conosoma* = larva of ?*M. domestica*, tends to eliminate *Conostoma* and *Conosoma* from consideration, thus apparently resulting in the adoption of *Promusca* for *M. domestica* unless the rules are suspended under the Plenary Power authorization. And for the purpose of recommendation to the Commission, the Secretary adopts as his premise, based on the evidence before him, the frank statement by the appellants (entomologists) that under the rules, *Musca* has for its type *M. vomitoria* Linn. [cf. Latreille's "*Musca vomitoria* F." ] and that Townsend acted in accordance with the rules when he proposed a new generic name for *M. domestica*. In making recommendation on this case to the Commission, the Secretary is influenced by his professional experience not only as a zoologist familiar with zoological and medical literature, but also as a public health officer, who has been very intimately identified with the legal aspects of applied zoology and with the campaigns looking toward the control of the fly nuisance through the cooperation of the laity. In the opinion of the Secretary a strict application of the Rules of Nomenclature in the case of *M. domestica* would result in confusion not only in the literature of Systematic Entomology but also in the literature of Applied Entomology, General Zoology, Public Health, Sanitation, and Law, and it would be probably a half century, if not longer, before the literature of these various phases of the subject could be harmonized in compliance with the present Rules of Nomenclature. The Secretary is persuaded that the Zoological profession could not justify itself in insisting upon a strict application of the rules in this particular case and that a strict application would produce greater confusion than uniformity. Accordingly, the Secretary recommends that: By authority of the power conferred on the Commission by the 9th International Con-

gress of Zoology to suspend the Règles as applied to any given case where in its judgment the strict application of the Règles will clearly result in greater confusion than uniformity, Article 30 is hereby suspended in the case of *Musca* Linnaeus, 1758, and *Musca domestica* Linnaeus, 1758, is hereby designated as type of *Musca*, without prejudice to other cases.

Opinion prepared by Stiles.

Opinion concurred in by 13 Commissioners: Apstein, Bather, Handlirsch, Horvath, Hoyle, Jordan (D. S.), Jordan (K.), Kolbe, Loennberg, Monticelli, Skinner, Stejneger, Stiles.

Opinion dissented from by no Commissioner.

Not voting, 2 Commissioners: Dautzenberg, Hartert.

Commissioner Jordan (D. S.) states: "The Plenary Power can and should be used not in clear-cut cases of priority, but when in case of early authors, either side is arguable, and deviation from current nomenclature would lead to confusion rather than clarity. For early writers had no conception of genotypes and used the genus as a 'pigeon-hole.' We might adopt the rule that we will accept current names, unless the reason for change is clear-cut and above reasonable cavil."

Commissioner Jordan (K.) states: "May I draw your attention to the following points?"

"Under 'Discussion' it is stated that *Musca* has for its type *vomitioria* L. According to the data given by you, Latreille 1810 selected *vomitioria* F. as type, and Townsend identified this *vomitioria* F. with *vomitioria* L. That is not an identification generally accepted. Fabricius consistently describes his *vomitioria* as having the frons 'fulva'; Latreille calls the frons 'roussâtre.' Linnaeus in F. Suec. expressly says that *mortuorum* differs from *vomitioria* . . . frons inter oculos, una cum antennis et ore, albo aurata sit ceu membrana, quod in sequenti (= *vomitioria*) non obtinet.

"Anyhow, European specialists past and present maintain that *vomitioria* of Fabricius is not *vomitioria* L. To me it seems at best doubtful which actual species Latreille meant.

"On the other hand, Macquart was quite definite in making *domestica* the type of *Musca*. In these circumstances a suspension of the rules appears to me a wrong move. It is inopportune to suspend the rules in face of the fact that we have definite facts, statements by Robineau with regard to *Calliphora* and by Macquart with regard to *Musca* and *Lucilia*, while Latreille's action is indefinite, because it leaves us in doubt about the actual species selected.

"Under No. 10 of the statement of the case it is said that 'This in accordance with Opinion No. 11 of the Intern. Commission is type.' This statement is liable to mislead those Commissioners who are unaware that *vomitioria* F. and *vomitioria* L. are not clearly the same insects. The attention of the Commissioners should have been drawn to this divergence of opinion among Dipterists, *i. e.*, the data given by Townsend do not represent the entire case.

"The case of *Musca* has been submitted to the Entomological Committee on Nomenclature and a few prominent Dipterists. The Committee expresses the opinion that

"(1) Latreille's selection of *vomitória* Fabr. as genotype of *Musca* leaves it doubtful whether he meant one of the original 100 species or one which was not among them, and

"(2) Macquart in 1834 designated *domestica* as type of *Musca*. It follows that a suspension of the Rules is unnecessary.

"Professor Bezzi is in favor of *domestica* being considered type of *Musca*.

"In order to arrive at unanimity with regard to the genotype of *Musca*, it would be advisable to add to Commissioner Stejneger's amendment after '*Musca* Linnaeus 1758' the words 'without prejudicing any other case.' The suspension of the Rules is tantamount to saying that *vomitória* F. is *vomitória* L. This decision could then be quoted as a precedent in other cases where the species is likewise doubtful."